Amendment to the Claims

This listing of Claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1-2. (Canceled)

3. (Previously Presented) A composition of matter comprising:

a liquid continuous phase,

a liquid discontinuous phase which is substantially immiscible in the continuous phase and

a surfactant,

wherein the continuous phase has a high volume resistivity, the discontinuous phase is electrically charged and the surfactant is selected to not significantly reduce the volume resistivity of the continuous phase.

4. (Original) A composition of matter as in Claim 3 wherein the surfactant has a first part which is compatible with the continuous phase and a second part which is compatible with the discontinuous phase.

5. (Currently Amended) A composition of matter as in Claim 3 further comprising in the discontinuous phase a compound selected from the group consisting of a bio-active agent, an activated nucleoside amidite (A, C, G or T), an activated oligonucleotide, a reagent or reactant including an acid or a base, a blocking chemical, a de-blocking chemical, an organic or inorganic derivatisation chemical, a catalyst, a pharmaceutical, a dye, and a pigment~~, and combinations thereof~~.

6-15. (Canceled)

16. (Previously Presented) A composition of matter as in Claim 3 further comprising a charge control agent.

17. (Currently Amended) A composition of matter as in Claim 16 wherein the charge control agent is selected from the group consisting of an acid and its salts, an organic acid and its salts, an ionic compound, and a zwitterionic compound~~, and combinations thereof~~.

18. (Currently Amended) A composition of matter as in Claim 16 wherein the charge control agent is selected from the group consisting of metallic soaps wherein the metal includes: barium, calcium, magnesium, strontium, zinc, cadmium, aluminium, gallium, lead, chromium, manganese, iron, nickel, zirconium and cobalt and the acid portion is provided by a carboxylic acid, and a phospholipid~~, and combinations thereof~~, or where the continuous phase is a fluoro-chemical the charge control agent comprises a fluorine analogue of the compounds listed above.

19. (Previously Presented) A composition of matter as in Claim 3 wherein the continuous phase is present in the range of about 40 to 99.99 per cent by volume, the discontinuous phase is present in a range of from about 0.01 to 60 per cent by volume.

20. (Previously Presented) A composition of matter as in Claim 3 wherein the discontinuous phase has a droplet size of from about 100 microns down to 0.2 microns.

21. (Previously Presented) A composition of matter as in Claim 3 wherein the emulsion is a mini-emulsion with a discontinuous phase having a droplet size from 1000 nanometers down to about 50 nanometers.

22. (Previously Presented) A composition of matter as in Claim 3 wherein the emulsion is a micro-emulsion with a discontinuous phase having a droplet size of from about 200 nanometers down to 1 nanometer.

23-33.(Canceled)

34. (Currently Amended) An emulsion comprising:

a continuous phase,

a discontinuous phase which is immiscible in the continuous phase, and

a surfactant, the surfactant having a first part which is compatible with the continuous phase and a second part which is compatible with the discontinuous phase,

wherein the continuous phase has a high volume resistivity, the discontinuous phase is electrically charged and comprises a compound selected from the group consisting of a bio-active agent, an activated nucleoside amidite (A, C, G or T), an activated oligonucleotide, a reagent or reactant including acids and bases, a blocking chemical, a de-blocking chemical, an organic or inorganic derivatisation chemical, a catalyst, a

pharmaceutical, a dye, and a pigment, ~~and combinations thereof~~ and the surfactant is selected to not significantly reduce the volume resistivity of the continuous phase.

35. (Canceled)

36. (Currently Amended) A composition of matter as in Claim 18 wherein the carboxylic acid is selected from the group consisting of caproic acid, octanoic (caprylic) acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, oleic acid, linolic acid, erucic acid, tallitic acid, resinic acid, naphthenic acid, and succinic acid~~, and combinations thereof~~.

37. (Previously Presented) A composition of matter as in Claim 19 wherein the surfactant is present in a range of about 0.01 to 20 per cent by weight.

38. (Previously Presented) A composition of matter as in Claim 16 wherein the charge control agent is present in a range of 0.01 to 10 per cent by weight.

39. (Canceled)

40. (Previously Presented) A composition of matter as in Claim 3 wherein the liquid continuous phase is electrically insulative.

41. (Previously Presented) An emulsion as in Claim 34 wherein the continuous phase is electrically insulative.

42. (Canceled)

43. (Currently Amended) A composition of matter as in Claim 3 wherein the continuous phase is selected from the group consisting of a hydrocarbon, a fluoro-chemical, and a silicone fluid~~, and combinations thereof~~.

44. (Currently Amended) A composition of matter as in Claim 43 wherein the hydrocarbon comprises hexane, decalin, cyclohexane, iso-octane, heptane, aromatic hydrocarbons, and isodecane~~, or a mixture thereof~~.

45. (Previously Presented) A composition of matter as in Claim 43 wherein the fluoro-chemical comprises a linear, cyclic or polycyclic perfluoroalkane, a bis(perfluoroalkyl)alkene, a perfluoroether, a perfluoroalkylamine, a perfluoroalkyl bromide, or a perfluoroalkyl chloride.

46. (Previously Presented) A composition of matter as in Claim 43 wherein the silicone fluid comprises a polyphenylmethyl siloxane, a dimethyl polysiloxane, a polydimethyl siloxane, or a cyclic dimethyl siloxane.

47. (Currently Amended) A composition of matter as in Claim 3 wherein the discontinuous phase of the emulsion is selected from the group consisting of acetone, acetonitrile, cyclohexanone, dibromomethane, dichloromethane, trichloromethane, dimethyl formamide, dioxane, 1,2-dichloroethane, nitromethane, tetrahydrofuran, toluene, decalin, dimethyl formamide, isobutanol, Isopar, Norpar, propylene carbonate, dimethyl

sulphoxide, isopropanol/methylene chloride, nitromethane/methanol, nitromethane/isopropanol, trichloromethane/methanol, and isopropanol/methylene chloride~~, and combinations thereof~~.

48. (New) An emulsion including

a liquid continuous phase,

a liquid discontinuous phase which is immiscible in the continuous phase, and

a surfactant, the surfactant having a first part which is compatible with the continuous phase and a second part which is compatible with the discontinuous phase,

wherein the continuous phase has a high volume resistivity, the discontinuous phase is electrically charged and the surfactant is selected to not significantly reduce the volume resistivity of the continuous phase.

49. (New) An emulsion as in Claim 48 wherein the continuous phase comprises a liquid which is electrically insulative having a volume resistivity of approximately 1×10^6 ohm-cm or greater.

50. (New) An emulsion as in Claim 48 wherein the continuous phase is selected from the group consisting of a hydrocarbon; a fluoro-chemical; and a silicone fluid.

51. (New) An emulsion as in Claim 48 wherein the continuous phase is a gel or highly viscous liquid.

52. (New) An emulsion as in Claim 48 wherein the discontinuous phase is non-aqueous and immiscible or substantially insoluble in the continuous phase.

53. (New) An emulsion as in Claim 48 wherein the discontinuous phase is selected from the group consisting of a reagent, a solvent which carries an active chemical reagent, and a carrier liquid for a solid or insoluble liquid dispersed in the discontinuous phase.

54. (New) An emulsion as in Claim 48 wherein the discontinuous phase of the emulsion is selected from the group consisting of acetone, acetonitrile, cyclohexanone, dibromomethane, dichloromethane, trichloromethane, dimethyl formamide, dioxane, 1,2-dichloroethane, nitromethane, tetrahydrofuran, toluene, decalin, dimethyl formamide, isobutanol, isopar, norpar, propylene carbonate, dimethyl sulphoxide, isopropanol/methylene chloride, nitromethane/methanol, nitromethane/isopropanol, trichloromethane/methanol, and isopropanol/methylene chloride.

55. (New) An emulsion as in Claim 48 further including in the discontinuous phase a compound selected from the group consisting of a bio-active agent, an activated nucleoside amidite (A, C, G or T), an activated oligonucleotide, a reagent or reactant including an acid or a base, a blocking chemical, a de-blocking chemical, an organic or inorganic derivatisation chemical, a catalyst, a pharmaceutical, a dye, and a pigment.

56. (New) An emulsion as in Claim 48 wherein the surfactant is selected to have a first part which is compatible with the continuous phase and a second part which is compatible with the discontinuous phase.

57. (New) An emulsion as in Claim 48 wherein the surfactant is selected from the group consisting of anionic, cationic, non-ionic or amphoteric compounds, polymer surfactant materials, phospholipids, and fluorinated analogues thereof.

58. (New) A composition being an emulsion including:

a continuous phase comprising an insulative liquid,

a discontinuous phase comprising a non-aqueous solvent and a chemical de-protecting reagent in solution in the non-aqueous solvent, and

a surfactant, the surfactant having a first part which is compatible with the continuous phase and a second part which includes a group which is compatible with the discontinuous phase, and

wherein the continuous phase has a high volume resistivity and the discontinuous phase is electrically charged and the surfactant is selected to not significantly reduce the volume resistivity of the continuous phase.

59. (New) A composition as in Claim 58 wherein the chemical de-protecting agent is selected from the group consisting of Lewis acids, protonic acids, zinc bromide, titanium tetrachloride, and ceric ammonium nitrate, dilute mineral acids, trichloroacetic acid, dichloroacetic acid, benzenesulphonic acid, trifluoroacetic acid, difluoroacetic acid, perchloric acid, orthophosphoric acid, toluenesulphonic acid, dodecylbenzene sulphonic acid,

dinonylnaphthyldisulphonic acid, dinonylnaphthylsulphonic acid, perfluorooctanoic acid and diphenyl acid phosphate.

60. (New) A composition as in Claim 58 wherein the continuous phase is a fluorochemical.

61. (New) A composition as in Claim 60 wherein the fluorochemical is a perfluoro-carbon selected from the group consisting of perfluoro-octane, linear, cyclic or polycyclic perfluoroalkylalkane, bis (perfluoroalkyl) alkene, perfluoroether, perfluoroamine, perfluoroalkyl bromide and perfluoroalkyl.

62. (New) A composition as in Claim 58 wherein the continuous phase is a silicone fluid or an organic liquid.

63. (New) A composition as in Claim 58 wherein the discontinuous phase of the emulsion is selected from the group consisting of acetone, acetonitrile, cyclohexanone, dibromomethane, dichloromethane, trichloromethane, dimethyl formamide, dioxane, 1,2-dichloroethane, nitromethane, tetrahydrofuran, toluene, decalin, dimethyl formamide, isobutanol, propylene carbonate, dimethyl sulphoxide, isopropanol/methylene chloride, nitromethane/methanol, nitromethane/isopropanol, trichloromethane/methanol, and isopropanol/methylene chloride.

64. (New) A composition as in Claim 59 wherein the surfactant is a fluorochemical-hydrocarbon selected from the group consisting of perfluorocarbon-propoxypropylene, fluoro-alkyl citrate, perfluoroalkyl-alkylene

mono-or di- morpholinophosphate and fluorinated phospholipids, alcohols, and polyols or polyhydroxylated or aminated derivatives.

65. (New) A composition as in Claim 58 wherein the surfactant is a non-ionic, anionic, cationic, amphoteric or zwitterionic surfactant.

66. (New) A composition as in Claim 58 further including a charge control agent.

67. (New) A composition as in Claim 66 wherein the charge control agent is selected from the group consisting of an acid and its salts, an organic acid and its salts, an ionic compound, and a zwitterionic compound.

68. (New) An composition as in Claim 66 wherein the charge control agent is selected from the group consisting of metallic soaps wherein the metal includes: barium, calcium, magnesium, strontium, zinc, cadmium, aluminium, gallium, lead, chromium, manganese, iron, nickel, zirconium and cobalt and the acid portion is provided by a carboxylic acid, and a phospholipid, or where the continuous phase is a fluoro-chemical the charge control agent includes a fluorine analogue of the compounds listed above.